**1-30gm of 1% hydrocortisone mixed with 40 gm 2.5% hydrocortisonen what is the concentration of the resulting solution?**

\ma) 3% b) 1.85%
c)10% d) none of the above
30gm----------1% ----------=0.3gm
40gm----------2.5% ----------=1gm
So, 70gm----------X%----------=1.3
So, the con. Result =1.3/70=1.857%

**2- A solution is made by dissolving 17.52 g of NaCl exactly 2000 ml. What is the molarity of this solution?**

a- 3.33 b- 0.15
c- 1.60 d-3.00 x 10 -4 e-1.6x10 -4

**Molarity=mole/volume (L)**
**1 Mole=molecular weight of subs. In 1 grams**
**No of Moles = wt / Mwt**
So, molecular weight of NACL=23+34=57
So, Mole=17.52/57=0.307
So, Morality=0.307/2=0.153

**HCl= 36.4**
**NH4Cl= 53.5**
**NaCl= 58.5**
**Kcl= 74.5**
**MgCl2= 95.2**
**CaCl2= 111**

**Na=23,5 Mg 24.3 Cl= 35.4 K= 39.1**

**3- Fifty micrograms equals:**

a-50000 ( nanogrames )? b- 0.05 ( milligrams )?
c- 0.0005 g
d- a and b
e- a and c

mc g : 1000 nano g milli g : 1000 mc g g : 1000 mg g : 1000000 mc g

**4-HOW can prepare 100 ml of 12% MgCl by taking?**

**a-12ml of MGCL dissolve in 100 ml water**
**b-12 gm of MGCL dissolve in 100 ml water**
**c-12ml of MGCL dissolve in 1000 ml water**
**d-90.5 ml of MGCL dissolve in 100 ml water**
**e-.95 ml of MGCL dissolve in 100 ml water**

**w / v = g / ml** ex **; 4% w/v means 4 gm in 100 ml**

**5**- prep. contin coal tar 30 part

petroleum 15 part

adeq. to 150 part 67

**what conc. of coal tar in 500 ml:-**

**30 part present in 195ml of prep.**

**x part present in 500ml of prep.**

**so, conc. of coal tar in 500ml=30x500/195=76.9 part**

**6- How many grams needed from drug in one teaspoonful , if 5 one tspfull doses contain 7.5 gm of drug ?**

**a) 0.0005**
**b) 0.5 `**
**c) 500**
**d) 1.5**
**e) 1500**

**7-90% of substance X solution , 50% of substance X solution , how mixing both to give 80% of substance X solution ?**

**a- 3: 1** **90%** **30**
**b-1:3** **80%**
**c-10:30** **50%** **10**
**d- 5: 9**
**B + C**

**8-2 mg \ L solution , according ppm :**

a-2 ppm
b-0.002 ppm
c-0.000002 ppm

**ppm = mg / L**

**9-5mlof injection that conc. 0.4% calculate the amount of drug?**

a-0.2mg
b-2mg
c-200mg
d-2000mg
e-20mg

**10-How need prepare benzacainamid conc. 1:1000,30cc of benzocainamid solution?**

a-30 b-50 c-80
d-100 e-130

**11- KI solu. Has 0.5mg/ml dissolve in 30ml water calculate the amount of KI in the solu. ? (15mg)**

**12- What is The Specific gravity of substance has Weight=Y & The volume is X ?**

**The Specific gravity =Density of the substance/Density of water**

So, the sp. gravity of sub. =weight (Y) /volume(X)/1
So, the sp. gravity of sub. =Y/X

**13- 5ml solu. amp has con. 0.2% amount of drug is :-**

a-0.1mg b-1mg c-10mg
d-100mg e-1000mg

14- How many benzocaine used to prepare 1:1ooo, 80 cc benzocaine… **( sol.=80ml)**

**15- the dose of drug is 0.5ml per day and the total amount of the drug Is 100ml what is the total dose ?sol.= <200 >**

**16 -drug dose is 5 present in 1ml & we give 5 doses of one tea spoonful What is the concentration by micog?**

**17-. A Patient weighting 80 Kg is supposed to receive a drug at a dose of 2 mg/kg/day.**
**What is the dose that the patient should take for each day:**
**A. 80 mg**
**B. 160 mg**
**C. 240 mg**
**D. 320 mg**
**E. 400 mg**

**18- Drug X is a given to a 70 Kg patient at an infusion rate of 0.95 mg/kg/hr. How much drug we need for a 12-hr infusion bottle if the patient weight is 70 kg:**
**A. 798 mg**
**B.66.5 mg**
**C" 840 mg**
**C. 665 mg**
**D. 84 mg**

**19. An elixir contains 0.1 mg of drug X per ml. HOW many micrograms are there in 5 one tsp of the elixir**

**:**
**A. 0.0005 micrograms**
**B 0.5 micrograms**
**C. 500 micrograms**
**D. 5 micrograms**
**E. 1500 micrograms**

**20 -how many gm of water add to 5% KCL soln to make 180 gm of solution(w\w)?**

**5gm----------100**

**Xgm----------180**

**X= 5x180/100=9 gm**

**So, the amount of water is:-**

**180 - 9 =171 gm**

**21- A patient cholesterol level is equal to 4mM/L. This cholesterol level can be expressed**
**in terms of mg/dL (molecular weight of cholesterol = 386)**
**A.0.0154 mg/dL**
**B. 0.154 mg/dL**
**C. 1.54 mg/dL**
**D. 15.4 mg/dL**
**E. 154 mg/dL**

**mMol / L * mwt / 10 = mg / dl**
**Conversion from mmol/L to**
**E. 154 mg/dL يبقي الاجابة 38.6 بنضرب في mg/dL**
**4x38.6=154.4mg/dl**

**22-The ppm concentration of a 6.35x1 0-6M solution of sucrose (molecular weight of sucrose is 342.3 g/mole) is:**

A. 2.174 X 10-3ppm
B.2.174 ppm

C.2.174gm/ml
C. Both A and B
D. Both Band C

**ppm concentration = mass in mg / volume in liters**

**mass (wt ) = mole * mwt = gm**

mass=6.35x10-6x342.3=2.174x10-3gm
volume=1literان وبفرض =2.174mg 1000 في نضرب يبقيmg ل نحولها لازم
B.2.174 ppmيبقي يبقي الحل

**23- A 500 infusion bottle contains 11.729 of potassium chloride (KGI). How many mEq of KCI are present? The molecular weight of KCI = 74.6:**

A. 0.1571 mEq
B. 1571 mEq
C. 6.37 mEq
D. 0.00637 mEq
E. 1.72 mEq

mEq=molecular weight/valency x 1000
mEq=74.6/1x1000=0.0746gm
11.729gm_____500ml
x_____1ml
x=11.729/500=0.023458 gm/ml

0.023458gm_____x
0.0746gm_____1mEq
x=0.314mEq

**24 - How gm of substance X must added to 2000 gm of 10% substance X solution in order to prepare 25% of substance x solution ؟**

**a) 10000**
**b) 400**
**c) 40**
**d) 10**
**e) 0.4**

**عوزين نعرف هنضيف 10%جرام بتركيز 2000الحل سهل إن شاء الله هو عندنا مادة وزنها 100% أد إيه من المادة دية والذي سوف يكون بتركيز 25%علشان يوصل التركيز بنسبة**

**(X) 100% 15**

**25%**

**(2000gm) 10% 75**

**2000gm ----------75**
**X gm ----------15**
**So, X gm =15x2000/75 =400 gm**